

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47 - 043 - 03593 County LINCOLN District DUVAL
Quad GRIFFITHSVILLE 7.5' Pad Name ENDICOTT, JOSHUA & KELLY Field/Pool Name GRIFFITHSVILLE
Farm name E.G. GRIFFITH Well Number 254
Operator (as registered with the OOG) H.G. ENERGY LLC
Address 5260 DuPONT ROAD City PARKERSBURG State WV Zip 26101

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,230,412 M Easting 416,525 M
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing 4,230,422 M Easting 416,735 M

Elevation (ft) 910' GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine
Mud Type(s) and Additive(s)
N/A

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Date permit issued 3/22/19 Date drilling commenced 7/17/19 Date drilling ceased 7/25/19
Date completion activities began 7/30/19 Date completion activities ceased 8/1/19
Verbal plugging (Y/N) N Date permission granted _____ Granted by _____

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft None Open mine(s) (Y/N) depths None
Salt water depth(s) ft 1080', 1130' Void(s) encountered (Y/N) depths None
Coal depth(s) ft 325', 465' Cavern(s) encountered (Y/N) depths None
Is coal being mined in area (Y/N) N

Reviewed
Jeff Smith

Reviewed by:
JS

API 47-043 - 03593 Farm name E.G. GRIFFITH Well number 254

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	15"	13 3/8"	12'	New	LS		Sand In
Surface	8 7/8"	7"	548.47'	New	LS	64'	Y
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2675.05'	New	LS		N
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 45 sks to surface on 7" surface cement job. Did not circulate cement to surface on 4 1/2" cement job.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Reg Neat	140	15.6	1.18	165	Surface	8
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50:50 Pozmix	130/125	13.2/14.2	1.64/1.27	213/186	921'	8
Tubing							

Drillers TD (ft) 2730' Loggers TD (ft) 2732'
 Deepest formation penetrated Berea Plug back to (ft) N/A
 Plug back procedure N/A

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Kick off depth (ft) 650'

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Check all wireline logs run caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING _____

20 Centralizers every 88 from bottom on 4 1/2", Centralizer placed mid string on 7"

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

API 47- 043 - 03593

Farm name E.G. GRIFFITH

Well number 254

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	7/30/19	2511'	2528'	68	Berea

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	8/1/19	4	707	1766	760	1,000	149	

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PRODUCING FORMATION(S)	DEPTHS	
Berea	2356'- 2376'	TVD 2507'- 2529' MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas _____ mcfpd Oil _____ bpd NGL _____ bpd Water _____ bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
Sand/Shale	0	465	0	465	
Pittsburgh Coal	465	471	465	471	
Sand/Shale	471	1634	471	1689	
Big Lime	1634	1848	1689	1932	
Big Injun	1848	1922	1932	2032	
Shale	1922	2336	2032	2484	
Coffee Shale	2336	2356	2484	2507	
Berea	2356	2376	2507	2529	Drilled directional N 87.4° E a distance of 691.8'
Shale	2376	2558	2529	2730	
TD	2558		2730		

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Please insert additional pages as applicable.

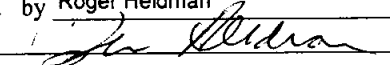
Drilling Contractor Noah Horn Well Drilling
Address 1070 Sandy Valley Lane City Vansant State VA Zip 24656

Logging Company Weatherford International
Address 13211 Old Hwy 50 City Flora State IL Zip 62839

Cementing Company Petroset Services
Address P.O. Box 1076 City Wooster State OH Zip 44691

Stimulating Company Producers Service Corp.
Address 109 South Graham Street City Zanesville State OH Zip 43701

Please insert additional pages as applicable.

Completed by Roger Heldman Telephone 304-420-1107
Signature  Title Operations Manager Date 8/14/19

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

Prepared for:

HG Energy

Dustin Henershot



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Prepared by:

Producers Service Corp

Landon Brooks

109 S. Graham St.

Zanesville, OH 43702

740-454-6253

INVOICE #: 22229
WELL NAME: E G Griffith #254
COUNTY/STATE: Lincoln/WV
TOWNSHIP/FIELD: Griffithsvile
DATE of SERVICE: 8/1/2019
CUSTOMER PO#:

Description	Notes	Amount	Units	Unit Cost	Total Cost
FLUID PUMP CHARGE 0-3000 PSI MIN CHARGE 4 HRS		1	EA		
BLENDER CHARGE 0-10 BPM		1	EA		
MILEAGE CHARGE PER UNIT ONE WAY	2 Units @ 200 miles	400	MI		
IC ACID 15%		250	GAL		
PRO HIB II		1	GAL		
ACID DELIVERY		2	HR		
PRO CLA FIRM LP		6	GAL		
PRO NE-21		6	GAL		
PRO GEL 4.0		8	GAL		
SAND 20/40 OTTAWA		10	CWT		
BIO CLEAR 750		1	LB		
IRONROL		50	LB		
DATA VAN		1	STAGE		
SAND DELIVERY / TON MILES		100	TMILE		

Customer Approval: _____